

Globalisation of Environmental Protection: Future Challenges for Malaysian Businesses

KADARUDDIN AIYUB¹, GERRARD, S.² & MARTIN, A.³

ABSTRACT

Globalisation has been defined as intensification of worldwide social relation which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa. Globalisation has been viewed in different ways – pros and cons - but insofar as environmental management perspectives is concerned, it is thought as the best way to protect the environment for human use. This is done by adopting common standards through a framework where goals and resources that are managed on a global scale being applied through decisions made locally. Several researchers have identified that globalisation of environmental protection has an impact on international trade and local businesses. Almost all of developing countries are dependant on their export to Western world especially to European Union and the United States where environmental concern on goods and products is high. Malaysia in particular has been involved in many multilateral environmental agreements (MEAs) and voluntary initiatives for environmental protection. At the regional level, ASEAN and APEC for example, have passed a number of declarations on environmental protection, which reveal their intention to safeguard the environment. This is a new challenge in doing businesses in the era of globalisation. This article highlights on Malaysia's responses to global environmental initiatives and their implication on international trade and domestic economy.

ABSTRAK

Globalisasi didefinisikan sebagai intensifikasi hubungan sosial-global yang menghubungkan ruang tempatan yang jauh di mana apa juga perubahan di peringkat tempatan ditentukan oleh perkara yang berlaku ribuan batu di tempat lain atau sebaliknya. Globalisasi dilihat dengan pelbagai cara – pro dan kontra - tetapi daripada perspektif pengurusan alam sekitar ianya adalah satu mekanisme yang paling baik untuk melindungi alam sekitar kegunaan manusia dengan mengadaptasi piawaian yang sama, matlamat dan sumber yang diuruskan diperingkat global tetapi dikenalpasti cara terbaik untuk melaksanakannya di .peringkat tempatan Ramai pengkaji telah mengenalpasti

bahawa globalisasi perlindungan persekitaran memberi kesan terhadap perdagangan antarabangsa dan perniagaan tempatan. Hampir kesemua negara membangun bergantung kepada eksport ke negara maju terutamanya Kesatuan Eropah dan Amerika Syarikat di mana keprihatinan alam sekitar terhadap produk atau barangan adalah tinggi. Malaysia khususnya, terlibat dalam banyak perjanjian alam sekitar pelbagai hala (MEA) dan inisiatif sukarela alam sekitar. Di peringkat wilayah atau kumpulan ekonomi, ASEAN dan APEC telah mengeluarkan beberapa deklarasi berkaitan pengawalan persekitaran yang menunjukkan komitmen kumpulan tersebut terhadap pengawalan persekitaran. Ini merupakan cabaran untuk menjalankan perdagangan dalam era globalisasi. Artikel ini mengenengahkan respon Malaysia terhadap inisiatif global dan implikasinya terhadap perdagangan antarabangsa dan ekonomi domestik.

INTRODUCTION

Business and environmental protection issues have been well thought-out in international fora. It has been suggested that pollution problems begin from industrialisation process in each country. Past experiences also pointed out that the problem originated from development and industrialisation process especially in developing countries such as Malaysia. As globalisation idiom spreading all over the world, which deals mainly on economic and trade issues, it has also given an impact on actions for global environmental protection. Multilateral Environmental Agreements (MEAs) are part of the ways to globalise environmental protection. There is also a significant link between the movement of foreign direct investment (FDI) by transnational corporations (TNCs) to developing countries and the emergence of international environmental standards.

Malaysia is one of the leading industrial economies in Southeast Asia and benefited from most of FDI to this region, which has speeded up the industrialisation process and enjoyed rapid economic growth before the economic crisis in 1997. The government's concern on environmental protection has begun since Stockholm conference. Malaysia is also an active participant in MEAs but at the same time try to protect local businesses from the impact of it. This paper highlights the impacts of globalisation of environmental protection on local businesses and the need for environmental management system (EMS) in international trade. It will also highlight several strategies that can be used as a basis for a national framework in promoting EMS among local

businesses, since with good and appropriate plan, they can compete and survive in the global arena.

GLOBALISATION AND ENVIRONMENTAL PROTECTION

Globalisation

Globalisation has been defined as an intensification of worldwide social relation which link distant localities in such a way that local happenings are shaped by events occurring at distant away places and vice versa. Political globalisation rhetoric has been seen as a factor that reduced nation's ability and power to control global changes (Giddens 1990; Voisey & O'Riordan 2001). However, it is up to a particular nation to define and deal with it.

The concept of globalisation has started since the Middle Ages through 'silk road' international trade and during the 19th Century through colonialism (Hallak 2000) but with different phrase. Globalisation today has been seen as a combination of the free exchange and movement of goods, services and capital. The fact is, from this concept of freer trade and movement of capital across nation's boundaries, there is an external effect on global scale; threat to the environment. This is why the environmental protection actions have been globalised through international standards and MEAs. As far as environmental management perspectives is concerned, it is thought as the best way to protect the environment for human use by adopting common standards, goals and resources that are managed on a global scale.

Foreign Direct Investment (FDI) and Transnational Corporations (TNCs)

The movement of FDI through TNCs to developing countries has been labelled as eco-dumping process. The idiom of *pollution haven* coined by Zarsky (1997, 1999) has accused developing countries to lower their environmental regulations to attract FDI. In the same tune, the North claim that they have more stringent and effective regulations on environment (Duchin et al. 1995; Xu 2000) compared to the South but at the same time the latter exported product has been protected by GATT (now WTO). This has been claimed as unfair treatment to them and they need single global environmental standard to create level playing field (Chudnovsky & Lopez 1999; Xu 2000) but developing countries viewed at it as another trade barrier. Whether pollution haven really becomes apparent is another issue but the most important thing for developing

countries is the need to develop and prosper their nations and achieve high quality of life. Nevertheless, the South learned all that from the North and believed only industrialisation can improve economic growth.

In globalisation era, the power of Western market cannot be denied thus their effort on environmental protection have to be acknowledged. As most of FDI and TNCs came from the North, there is a pressure for TNCs to coalesce business needs and environmental protection in developing countries because they are always in front in terms of technology and management strategy. This is a challenge for businesses especially when environmental matters are important requirement to trade in Western world especially in the European Union (EU). Most of the TNCs realised of these requirement and already taking actions to achieve it. Where TNCs located in developing countries local businesses have the obligation to implement environmental sound management to complement the TNCs process.

Previously, several countries have experienced the impacts of globalisation on environmental protection (but some of it only used environmental issues for the purpose of protecting their own industry). Several examples are like the case of dolphin-tuna between US and Mexico, banned on fur product by EU, Brazil paper industry vs. EU and banned on tropical wood product - Malaysia vs. Austria. Most of the examples above have been criticised as more to economic sanction rather than related to environment. However, restriction based on environmental matters can more obviously be seen in EU which have strict standard on recycling, packaging and life cycle analysis. These issues have to be recognised by TNCs in developing countries.

Multilateral Environmental Agreements (MEAs)

MEAs is one of the ways to globalise the environmental protection efforts. There is more than 180 MEAs already in existence and over 20 of them incorporate trade measures that have been designed to realise four major objectives (Brack 1997):

- ❖ to restrict markets for environmentally hazardous products or goods produced unsustainably;
- ❖ to increase the coverage by encouraging governments to join and/or comply with the MEAs;
- ❖ to prevent free riding; and
- ❖ to ensure MEAs effectiveness by preventing leakage from other non-participants countries.

To comprehend all those MEAs, several efforts are taken by regional economic groups, trade unions, United Nations and International Organisation for Standardisation (ISO). In the case of EU, environmental issue has been the centre point in their regional co-operation. All member countries have to oblige to EU regulations on environment, including the movement of products and goods in European countries market. Even though those regulations apply only to the member countries, these also take effect on any goods and products around the world for example, issues like products packaging, reuse and recycling of waste. In global scene, the ISO introduced the ISO 14000 EMS series of standards. It is a voluntary standard but most of TNCs found it as one of the requirement to market their goods and product especially in the Western market. Another popular voluntary action is made by the chemical industry association; Responsible Care programme which apply to all chemical industries all over the world.

MEAs and voluntary standards have given impacts on action taken by the governments and also TNCs. It might be a matter of survival and/or be competitive in global market. Japanese TNCs for example, is very proactive in gaining environmental recognition, as they know that it is the way to maintain and spread their product market. Anywhere in the world, Japanese TNCs is the highest numbers that are certified with ISO 14001 including in Malaysia where 80% of certified ISO 14001 organisations are Japanese. In this case any country in the world should realise the importance of the certification and its impacts on local businesses that act as vendors to TNCs.

MALAYSIAN ECONOMY

As one of the New Industrialised Economies (NIEs) and acknowledged as a second tier 'tiger', Malaysia enjoyed economic growth (annually above 8%) for almost ten years before the 1998 economic crisis. Most of the prosperity came from the rapid industrialisation process which began in 1970s. In 1990s, this process has shifted toward more aggressive when the government completed nation's major infrastructure; North-South highway, major ports in Klang and Johor, new international airport (KLIA) and world known Multimedia Super Corridor (MSC). All of these targeted to comprehend industrialisation process and increased FDI into the country.

Malaysia received RM 19.819 billion FDI in 2000 compared to RM 12.274 billion a year before. Five major FDI came from USA, Japan, Holland, Germany and Singapore. After 1997-1999 economic crises,

Malaysian economy has shown improvement. Export value increased in 2005 compared to 2000 with the value of RM 533.8 billion. In terms of exported product, manufacturing goods accounted for 80.5% from total exports in 2005. This sector remains important as rapid industrialisation brought most of FDI into this sector (Utusan Express 2001). Mining sector, especially petroleum and liquid natural gas emerged second important when agriculture sector falls mainly due to decrease in palm oil price in the world market.

The flow of FDI into Malaysia has brought success in industrialisation process and hopefully this trend will continue as Malaysia aims to be a fully industrialised country in year 2020. We should also be aware that recent global concerns on environmental protection has affected foreign TNCs. As we know their priority is to remain in the market and profit from it, there is no doubt that they will take any necessary action including bringing environmental consideration into their strategies and pressure on their suppliers. Local businesses should take further action to comprehend TNCs initiatives in environmental protection efforts. Are we ready for that?

GLOBALISATION: IMPACTS ON MALAYSIAN BUSINESSES

In developing countries, the initiatives to bring environmental considerations into businesses are laid on local and foreign TNCs and most important, the government. Most of foreign TNCs brought their home model of management into developing countries and usually with good environmental sound management. TNCs from the EU, Japan and America usually practice EMS within their organisation and will make sure that this image is being preserved. They will ensure every product and suppliers follow the same system under Supply Chain Environmental Management (SCEM) where TNCs conduct life cycle analysis on every step of production (including in suppliers operation) to comply with environmental regulations. This is the challenge for local businesses to follow the actions taken by their customers (TNCs) and requirement in international trade.

With current global scenario, Malaysian businesses should find ways to be an active player in environmental matters and also participate to implement environmentally sound management. The Ministry of International Trade and Industry (MITI) has started several initiatives such as Global Supplier Programme (GSP), Industrial Linkages Programme (ILP) and Vendor Development Programme (VDP) to link local businesses especially SMEs with TNCs (MITI 2000). While these

programmes are in a row, TNCs will demand environmentally sound management to be implemented sooner or later as their products compete in the global market.

One of the global efforts to globalise environmental protection action is the introduction of ISO 14001 in 1996. Even though the standard is voluntary in nature, it has gained acceptance all over the world especially when it is needed as a trade requirement in certain parts of the world. Businesses in Malaysia have responded well to this standard especially Japanese TNCs. As of December 2004, 566 organisations in Malaysia have been certified with it and Japanese TNCs accounted for 80% of them (ISO 2005). Several local TNCs like Guthrie, Petronas and Golden Hope also supported the standards but it is not known whether it applied to their affiliates outside Malaysia. Local businesses especially SMEs are still behind the wave. In recent survey (Kadaruddin & Kadir 2001), not more than 5% of certified ISO 14001 organisations in Malaysia is local SMEs. The good news is most of them (SMEs) has been supported and encouraged by their customers (foreign TNCs) through SCEM initiatives.

ACTIONS AND STRATEGIES

Malaysia (and probably ASEAN, G15 and G77 nations) is lucky to have Ms. Rafidah as Trade Minister to voice out in international forum to protect the interests of developing countries regarding trade barriers. In recent development, she again objected the next WTO round in Doha to include environmental issues to be discussed in relation with trade. As we believe, this action do not solely indicate that Malaysia objected all environmental protection efforts but needed more time for it to better prepare local businesses. Even the government resentment on linking trade and environmental issues are obvious in international trade discussion, efforts to comply with other MEAs still growing considerably. Malaysian government has taken several strategies on promoting environmental sound management among TNCs and local businesses.

Legislation

Three types of legislation have been established in Malaysia since early 1970s in an effort to promote environmentally sound management and in preserving the natural resources: (a) incentive-driven, (b) corrective, and (c) preventive/planning.

- a. Incentive-driven legislation. In relation with industrial activity, several legislation such as the Promotion of Investment Act, 1986, Income Tax Act, 1967, Customs Act, 1967, Sales Tax Act 1972 and Excise Act, 1976 have been used to attract FDIs and TNCs and at the same time offer incentives for environmental protection initiatives. Incentives have been given for;

- ❖ storage, treatment and disposal of toxic and hazardous waste,
- ❖ conservation of energy,
- ❖ waste recycling activities,
- ❖ utilisation of biomass,
- ❖ exemption of import duty and sales tax on materials, machinery and equipment,
- ❖ use of environmental protection equipment in production processes,
- ❖ infrastructure allowance,
- ❖ single deduction for donation meant for the protection and conservation of the environment.

Any business taken on any of the above initiatives are eligible for Pioneer Status (they only have to pay tax on 30% of their statutory income) or Investment Tax Allowance (up to 70%) for five years. (Note: These figures will change in yearly national budget).

- b. Corrective. The major legislation to protect the environment in Malaysia is the Environmental Quality Act (EQA), 1974. This Act has been amended twice to better protect the environment and to keep pace with time and development. Although, there are more than 44 pieces of environment-related legislation in existence in Malaysia, this Act is the most comprehensive ever enacted and has most of the power covering all sources of pollution; air, water, land and sea. EQA 1974 has been amended twice to increase the penalty for non-compliance. Before the first amendment in 1985, the penalty for non-compliance is RM 5000 or a year imprisonment or both. The penalty has been raised to RM 50,000 and with cases involving water pollution the penalty was increased to RM 500,000.
- c. Preventive/planning. When the EQA 1974 was amended in 1985, Section 34A on Environmental Impact Assessment (EIA) requirement was included. This section requires environmental impact assessment report on 19 prescribed activities to be submitted

to the Director General of Environment for approval prior to the start of the project. This amendment was aimed at providing protection to the environment before any development takes place and/or help to plan any mitigation strategies after operation. In 1996, the EQA was again amended placing more emphasis on the management and control of hazardous waste, establishing environmental audit and introducing research 'cess' and environmental fund.

Under the EQA 1974, several regulations have been gazetted to complement its implementation. These regulations have been made consequently to economic change and global scenario. Nine regulations that have been gazetted before 1985 had the intention of preventing pollution from agricultural-based industry such as rubber and crude palm oil as Malaysia was largely dependant on these industries at the time. From 1985 to 1989, as Malaysian industrialisation programme became more aggressive, several other regulations on scheduled waste, their treatment and disposal were made. In 1993, regulations on greenhouse gases were put into place and in 1999 another two (management of Halon and refrigerant) were made. This trend showed that Malaysian government was taking every step to upgrade the environmental protection effort based on economic development and global change. All the regulation gazetted under EQA, 1974 seem to comprehend several global MEAs like Montreal Protocol, Basel Convention and Kyoto Protocol and reflect the rapid industrialisation process.

Government Policies

The government's desire and commitment to protect the environment has been documented in several national planning strategies such as *Malaysian Five Year Plans*, 1st and 2nd Long Term Planning Framework, Vision 2020 and yearly national budget. Starting from Third Malaysia Plan (1976-1980) to the present Ninth Malaysian Plan (2006 to 2010), the government has shown their commitment to protect the environment and natural resources alongside with economic development. In other words, Malaysia aims to be a fully developed nation by year 2020 and to increase economic and physical development without jeopardising the importance of sustainable development. In the Seventh Malaysian Plan (1996 to 2000) issues of trade and environment have gained consideration and Malaysia has set up the Committee on Trade and Environment to look at trade related environmental policies (Malaysia 1996). In the struggle to grapple with the globalisation era, the government has set up a committee to study globalisation impact (hopefully to include trade and

environment issues) in Economic Planning Unit (EPU) under the Prime Minister's Department. Malaysia realises that globalisation and trade liberalisation will change global market flows and investment and they will take prompt actions to deal with it the Malaysian ways.

Technological Advancement

In encouraging the technological advancement in environmental protection, Malaysia through Standards and Industrial Research Institute of Malaysia (SIRIM) provides consultations for any businesses who intend to use environment-friendly technology. SIRIM's engagement with foreign organisations such as DANCED from Denmark conducted technological transfer on environment-friendly processes especially for Malaysian SMEs.

Government Agencies

In relation with business and trade, government agencies e.g. Small and Medium Industries Development Corporation (SMIDEC), Malaysian Industrial Development Authority (MIDA) and Malaysian External Trade Development Corporation (MATRADE) under MITI have played major roles in helping local businesses to compete in global arena. Apart from helping them in terms of financial and business survival issues, these agencies also promote several programmes in relation with R&D, technology and infrastructure development. The Department of Environment (DOE) also acts as a centre for pollution information and legislation requirement.

Other Actions

Apart from the above actions, issues of business and the environment still require more attention. There has not been much efforts from trade unions or even NGOs to promote the issues. Some of the local universities with the support from local TNCs has taken proactive actions in organising workshops for businesses to establish the ISO 14000 and the importance of environmental matter in business survival. This effort could be enhanced if they have enough funds. The establishment of Business Council for Sustainable Development in Malaysia (MBCSD) in 1992 which aims to bridge business and environmental issues has gained some recognition but there are still more that can be done.

BUILDING FRAMEWORK FOR NATIONAL STRATEGIES

As the world market became more tempted and more regulations on environmental protections became obvious, Malaysia should take further action to prepare and encourage their businesses to implement environmentally-sound management. Malaysia could avoid the hassle by exporting their goods and products to less developed countries or countries with less strict environmental regulations but this did not solve the problem. Most of Malaysia's export products goes to developed countries market; 54.6% of Malaysian exports goes to USA, EU and Japan. The fact that Western markets are still very much important cannot be denied. In the process to promote environmental consideration into businesses, several strategies can be applied. Two most important needs are organisational learning and organisational support.

Organisational Learning and Changing Perspectives on Environment

In the process to gain acceptance in the market, businesses should consider any changes or any requirements needed. Organisations interacts with many external forces where managerial perception is very important and gives impacts on decision-making. In strategic management studies, environment was viewed as a multidimensional concept that consists of economic, political, cultural and technological forces. Competition is forced into industry. Organisations are concerned on how to be competitive in the market. Natural environment remained outside of their domain of concerns and environmental degradation is regarded as an externality to production. Corporate Social Responsibility (CSR) perspectives have a liberal conception on environment and their concept is based on 'organisation stakeholders'. They give a focus to strategic decision making. CSR acknowledges natural environment problems were caused by organisation's activities. CSR seek to reform on system, which benefits stakeholders. In CSR, environment is treated as a specific issue- '*social policy issue*' which is not central to organisational theorising (Shrivastava 1997).

Aldrich (1979), Mullin (1985), highlighted the concept of strategic decision and contingency theory where organization, from time to time will consider and deal with any new pressure from the environment. Drucker (1968) suggested that organisations should not emphasise only on profit, but should balance between variety of needs and goals and should have multiple objectives, which include market standing, innovation, profit, finance resources, human performances and public responsibility. As far as Drucker's concept on organisational behaviour

and risks is concerned, proactive environmental management practices are complementary and break through behaviour and are the risk that one must accept, can afford to take and risk one cannot afford not to take.

In a learning process, businesses should utilise all efforts and technology. Learning process requires certain information and knowledge to be acquired in order to succeed. This is not impossible in the era of information communication technology (ICT). Presently, Malaysian government has encouraged local businesses especially SMEs to be involved in ICT in their daily operation. Several government agencies have been appointed to help and funds are made available for them. ICT will not only help businesses to run their operation but also help them to acquire any information needed (e.g. environmental technology, EMS, trade requirements).

Even with all the technologies available, environmental self-awareness among business managers is also vital. It can be a driver for change and more focus on their actions. In Malaysia, public awareness on environmental issues has increased over time especially when pollution gave direct impact on them but they still lack the awareness on certain issues like demanding for *green* products, climate change impacts or EMS. It might be a factor for some businesses to take for granted on environmental matters especially when they operate in large industrial area far from the community. Environmental self-awareness among the managers is important and one of the ways to tackle the issues is *greening* the businesses and management school in local universities. They are future managers for businesses in Malaysia and they should be prepared with environmental knowledge that are related to business strategy and competition in the market. As mentioned before, in any organisational theories, strategic management and CSR, environmental matters have been placed as externalities. Changes can be made and the theories can be evolved.

Organisational Support

In the process to change towards more proactive environmental management, businesses need support from every aspect. In the case of large organisations, this might not be a big obstacle but for medium and small businesses; it will. In Malaysia, there is a support from government agencies in promoting EMS but a lot more can be done.

Experiences from developed countries have showed that regulations alone cannot solve the problem or initiate environmental consideration in businesses. They also need support and information on how to comply with it. In the United Kingdom, apart from strict regulations on

environment, the government also put aside large amount of funds for environmental promotion initiatives. These funds have been used to set up one stop environmental information agencies (e.g. Environmental Technology Best Practice Program (ETBPP), the Energy Efficiency Best Practice Programme Helpline and SCEEMAS-the Small Company Energy and Environmental Management Assistance Scheme) to assist businesses especially SMEs on environmental best practices. Even though Malaysia has SIRIM to play this role, their contribution has been limited as they also concentrate on other issues like product certification, testing and technology development. Malaysia could use the newly established '*environmental cess*' {fund created under EQA 1974 (Amendment) 1996} for these purposes.

Malaysia has allocated around 14% of their annual budget for environmental protection which includes programmes for river protection, flood mitigation, enhancing enforcement, upgrading waste facilities, etc. It might be useful if some of the fund is used for the purpose of promoting environmental sound management in industry (i.e. environmental information centre, consultation and incentives). Furthermore, it is useful if the effort goes to the sources of pollution problems i.e. the industries. If pollution prevention actions are taken at their sources, saving could be made from cleaning the environment.

It is no doubt that the government has responsibility to ensure the natural resources and the environment are protected but their initiatives need further support. Non-governmental organisations (NGOs) in Malaysia has been vocal on development and industrialisation impacts on environment but only few take proactive action in giving information or consultation to local businesses on how to protect the environment. NGOs could establish local business and environment clubs for this purpose. The idea of such club has gained reputation and benefited local businesses in the Western countries. This action needs collaboration with local authorities, universities (expertise support) and businesses itself. The establishment of MBCSD in 1992, aimed at bridging business and environmental issues but some may raise the question whether its functions has been successfully achieved or even are all Malaysia businesses aware of the existence of the establishment itself.

Business peers, trade unions and larger TNCs have their own responsibility in promoting environmentally sound management. TNCs have started their efforts through SCEM initiatives. As their products are being scrutinised for environmental compliance, they have to make sure their suppliers comply with the same procedures. SONY Malaysia, for example, has created initiatives to help their suppliers especially SMEs to

implement ISO 14000 standards. This initiative included staff and financial support. We believe if other TNCs act on the same initiatives, a lot more local businesses, especially SMEs could benefit from it.

CONCLUSION

Developing countries like Malaysia will always put a priority on development and economic growth. Malaysia is engaged in rapid industrialisation programme and aggressive in attracting foreign investments but this doesn't mean that it is a '*pollution haven*' to foreign TNCs. Malaysia has a good set of environmental legislation as pollution deterrent and to protect the natural resources. Starting from early 1980s, Malaysia began to strengthen her environmental policies and legislation. More efforts have been taken and those complement the MEAs. As the 17th largest trading nations in the world, Malaysia realised the importance of environmental issues in global trade. The foundation has been established and efforts to expand the actions are in the pipeline. To realise the actions, local businesses have to increase their efforts to acquire knowledge and environmental information. They also need a good support from the public, the government and their agencies and organisations that have already implemented sound environmental management. If these efforts are coordinated, Malaysian businesses have no reasons not to succeed locally or even globally.

REFERENCES

- Aldrich, H.E. 1979. *Organisations and environment*. New Jersey: Prentice Hall.
- Brack, D. 1997. Reconciling the GATT and Multilateral Environmental Agreements with trade provisions: The latest debate. *Review of European Community and International Environmental Law (RECEIL)*, 6(2): 112-120.
- Chudnovsky, D. & López, A. 1999. Improving the environmental performance of TNCs: Voluntary versus mandatory approaches. A background note. Occasional Paper No. 10. Copenhagen Business School, Denmark.
- Drucker, P.F. 1968. *The practice of management*. Pan Book.
- Duchin, F., Marie-Lange, G & Kell, G. 1995. Technological change, trade and the environment. *Ecological Economics* 14: 185-193.
- Giddens, A. 1990. *The consequences of modernity*. Cambridge: Polity Press.
- Hallak, J. 2000. Globalisation and its impact on education. In: Mebrahtu, T, Crossley, M. & Johnson, D. (eds.). *Globalisation, educational transformation and strategies in transition*. Wallingford, Oxford: Symposium Books, pp. 21-40.

- International Organisation for Standardisation (ISO). 2005. *The ISO survey 2004*. Geneva: ISO.
- Kadaruddin, A. 2000. Sistem pengurusan persekitaran ISO siri 14000 dan pengimplementasiannya di Malaysia. In. Jamaluddin, M.J. (ed.). *Pengurusan persekitaran di Malaysia: Isu dan cabaran*. Bangi: Pusat Pengajian Siswazah, Universiti Kebangsaan Malaysia.
- Kadaruddin, A. & Kadir, A. 2001. Globalisasi, perniagaan dan alam sekitar: Cabaran untuk industri kecil dan sederhana di Malaysia. Paper presented at Persidangan Kebangsaan Keusahawanan dan Perusahaan Kecil, organised by Universiti Utara Malaysia, Langkawi, 8-11 September.
- Malaysia, 1996. *Seventh Malaysian Plan 1996-2000*. Kuala Lumpur: Economic Planning Unit, Prime Minister's Department.
- Ministry of Industry and International Trade (MITI). 2000. Statistik perdagangan Malaysia. www.miti.gov.my
- Mullin, L.S. 1985. *Management and organisational behaviour*. London: Pitman Pub. Ltd.
- Shrivastava, P. 1997. Ecocentric management for a risk society. In. McDonagh, P. & Prothero, A. (eds.). *Green management: A reader*. London: The Dryden Press, pp. 22-39.
- Utusan Ekspres*. 2001. FDI on the rise. 2 Julai.
- Voisey, H. & O'Riordan, T. 2001. Globalisation and localisation. In. O'Riordan, T. (ed.). *Globalism, localism and identity: Fresh perspectives on the transition to sustainability*. London: Earthscan Publishing, pp 25-42.
- Xu, Xinpeng. 2000. International trade and environmental policy: how effective is 'eco-dumping'? *Economic Modelling* 17: 71-90.
- Zarsky, L. 1997. Stuck in the mud? Nation-States, globalization and the environment. Globalisation and Environment Study, OECD Economics Division, The Hague, The Netherlands.
- Zarsky, L. 1999. Havens, halos and spaghetti: Untangling the evidence about Foreign Direct Investment and the environment. Conference on Foreign Direct Investment and the Environment, organised by OECD, The Hague, Netherlands, 28-29 January.

¹ *School of Social, Development and Environmental Studies,
Faculty of Social Sciences and Humanities,
Universiti Kebangsaan Malaysia,
43600 UKM, Bangi, Selangor, MALAYSIA.*

² *School of Environmental Sciences,*

³ *School of Development Studies,
University of East Anglia,
NR4 7TJ, Norwich, UNITED KINGDOM.*

E-mail: kada@pkriscc.ukm.my